UNITED STATES PATENT AND TRADEMARK OFFICE

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10/665,090	09/18/2003	Satoshi Katsuo	450100-04756	6200

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EXAMINER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-62_ is/are pending in the application.
     4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) _1-62_ is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
     a)☒ All   b)☐ Some * c)☐ None of:
       1.☒ Certified copies of the priority documents have been received.
       2.☐ Certified copies of the priority documents have been received in Application No. _____.
       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
     Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Specification

1.   The disclosure is objected to because of the following informalities:

The disclosure is objected to because it contains an embedded hyperlink and/or other

form of browser-executable code. Applicant is required to delete the embedded hyperlink and/or

other form of browser-executable code. See MPEP § 608.01.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

2.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
> conditions and requirements of this title.

3.   Claims 61 and 62 are rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter.

Claim 61 recites "a program". However, it appears that such would reasonably be

interpreted by one of ordinary skill in the art as software, per se. This subject matter is not

limited to that which falls within a statutory category of invention because it is not limited to a

process, machine, manufacture, or a composition of matter. Software does not fall within a

statutory category since it is clearly not a series of steps or acts to constitute a process, not a

mechanical device or combination of mechanical devices to constitute a machine, not a tangible

physical article or object which is some form of matter to be a product and constitute a

manufacture, and not a composition of two or more substances to constitute a composition of

matter.

However, in contrast, a claimed computer-readable medium encoded with a computer

program is a computer element which defines structural and functional interrelationships

between the computer program and the rest of the computer which permit the computer

program's functionality to be realized, and is thus statutory. See *Lowry*, 32 F.3d at 1583-84, 32

USPQ2d at 1035 (MPEP 2106.01.I). Any amendment to the claim would be commensurate with

its corresponding disclosure.

Claim 62 recites a data structure which does not impart functionality to a computer or

computing device, and is thus considered nonfunctional descriptive material. Such nonfunctional

descriptive material, in the absence of a functional interrelationship with a computer, does not

constitute a statutory process, machine, manufacture or composition of matter and is thus non-

statutory per se.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

5.   Claims 1-3, 10-13, 30-43 and 50-62 are rejected under 35 U.S.C. 103(a) as being

obvious over Wilkinson (US 2002/0164149 A1).

The applied reference has a common assignee with the instant application. Based upon

the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C.

102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37

CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(l)(1) and § 706.02(l)(2).

Regarding Claim 1, Wilkinson teaches a conversion apparatus for converting a file of a format including a header, a body, and a footer (Paragraph [0013]), comprising:

- conversion means for converting one of a file of a first format, which includes first and second data placed in a multiplexed state in the body (Paragraph [0002] – video and audio data, see Abstract), and a file of a second format, which includes first or second data collectively placed in the body into the other of the files (Paragraphs [0015,0080,0142] – SDI or SDTI and MXF conversion).

Regarding Claim 2, Wilkinson teaches the conversion apparatus according to claim 1, wherein said conversion means includes first format conversion means for converting a file of the first format into a file of the second format (Paragraph [0133] – MXF converter).

Regarding Claim 3, Wilkinson teaches the conversion apparatus according to claim 2, wherein the first and second data are video data and audio data, respectively (Paragraph [0002] – video and audio data, Fig. 7, picture and audio data).

Regarding Claim 10, Wilkinson teaches the conversion apparatus according to claim 3, wherein the body of a file of the first format has metadata placed therein in a form multiplexed together with the video data and the audio data, and said first format conversion means further includes metadata file preparation means for preparing a metadata file in which the metadata multiplexed in the bodies of a file of the first format are collectively placed (Paragraph [0115,0129,0125,0140]).

Regarding Claim 11, Wilkinson teaches the conversion apparatus according to claim 10, wherein said first format conversion means further includes file preparation means for preparing a master file describing a pointer to the metadata file (Paragraph [0115,0129,0125,0140]).

Regarding Claim 12, Wilkinson teaches the conversion apparatus according to claim 2, further comprising recording means for recording a file of the second format obtained by said second format conversion means onto a recording medium (Figs. 10-12, 46 – file transfer/storage).

Regarding Claim 13, Wilkinson teaches the conversion apparatus according to claim 1, wherein said conversion means includes second format conversion means for converting a file

of the second format into a file of the first format (Figs. 10-12, 48,50,52 – de-multiplex of MXF

through encoder to SDTI).

Regarding Claim 14, Wilkinson teaches the conversion apparatus according to claim

13, wherein the first and second data are video data and audio data, respectively (Paragraph

[0002] – video and audio data, Fig. 7, picture and audio data).

Regarding Claim 15, Wilkinson teaches the conversion apparatus according to claim

14, wherein a file of the second format includes a video file wherein a header and a footer of a

form same as that of a file of the first format is added to the body in which the video data are

placed collectively (Paragraph [0115,0129,0125,0140]), and audio files for audio data of a

plurality of channels in each of which a header and a footer of a form same as that of a file of

the first format is added to the body in which the audio data of the channel are placed

collectively (Paragraph [0115,0129,0125,0140]), and said second format conversion means

includes:

- video header/footer removal means for removing the header and the footer from the

  video file (Paragraph [0129,0135]);

- video data decomposition means for decomposing the video data of the video file into

  video data of units to be multiplexed with the audio data ((Paragraphs [0139,0140]);

- audio header/footer removal means for removing the headers and the footers from the

  audio files (Paragraph [0129,0135]);

- channel multiplexing means for multiplexing the audio data of the channels of the audio

  files and outputting resulting channel-multiplexed audio data (Paragraphs

  [0115,0128,0135]);

- data multiplexing means for multiplexing the video data obtained by said video data decomposition means and the channel-multiplexed audio data obtained by said channel multiplexing means (See Abstract, Paragraphs [0115,0129,0135,0140]); and

- header/footer addition means for adding a header and a footer of a file of the first format to a body provided by the data obtained by said data multiplexing means (Paragraphs [0055,0090,0091,0093,0110,0135] – addition of header and footer with mapping).

Regarding Claim 16, Wilkinson teaches the conversion apparatus according to claim 15, wherein the audio data of the audio files in a file of the second format is KLV-encoded audio data (Paragraphs [0042,0044,0045,0050+]), and said second format conversion means further includes:

- KLV structure decomposition means for decomposing a KLV structure of the KLV-encoded audio data (Paragraphs [0139,0140]); and

- KLV structuring means for KLV-encoding the channel-multiplexed audio data into audio data of the KLV structure in a unit to be multiplexed with the video data (Paragraphs [0090,0091,0093,0095,0129,0135] – encoding).

Regarding Claim 17, Wilkinson teaches the conversion apparatus according to claim 15, wherein the audio data in a file of the second format are data encoded by a second coding method from between first and second coding methods (Figs. 10-12, 36 – SDTI-CP encoder), and said second format conversion means further includes audio data conversion means for converting the audio data of the audio files from audio data encoded by the second coding method into audio data encoded by the first coding method (Figs. 10-12, 42 – MXF creator; Paragraphs [0135,0137,0139]).

Regarding Claim 18, Wilkinson teaches the conversion apparatus according to claim 15, wherein a file of the second format further includes a metadata file in which the metadata are placed collectively, and said data multiplexing means multiplexes not only the video data and the channel-multiplexed audio data but also the metadata (Paragraph [0115,0129,0125,0140]).

Regarding Claim 19, Wilkinson teaches the conversion apparatus according to claim 13, further comprising transmission means for transmitting the file of the first format obtained by said second format conversion means through a transmission medium (Figs. 10-12, 46 – file transfer).

Regarding Claim 20, Wilkinson teaches the conversion apparatus according to claim 1, wherein the first format is the Material Exchange Format (MXF) (Fig. 1; Paragraphs [0041,0042,0053]).

Claims 21 and 11 are rejected under the same grounds as claim 1.
Claims 22 and 42 are rejected under the same grounds as claim 2.
Claims 23 and 43 are rejected under the same grounds as claim 3.

Claims 30 and 50 are rejected under the same grounds as claim 10.
Claims 31 and 51 are rejected under the same grounds as claim 11.
Claims 32 and 52 are rejected under the same grounds as claim 12.
Claims 33 and 53 are rejected under the same grounds as claim 13.
Claims 34 and 54 are rejected under the same grounds as claim 14.
Claims 35 and 55 are rejected under the same grounds as claim 15.
Claims 36 and 56 are rejected under the same grounds as claim 16.

Claims 37 and 57 are rejected under the same grounds as claim 17.

Claims 38 and 58 are rejected under the same grounds as claim 18.

Claims 39 and 59 are rejected under the same grounds as claim 19.

Claims 40 and 60 are rejected under the same grounds as claim 20.

Regarding Claim 61, Wilkinson teaches a program for causing a computer to execute a conversion method for converting a file of a format including a header, a body, and a footer (Paragraphs [0001,0013,0026]), said program comprising:

- a conversion step of converting one of a file of a first format, which includes first and second data placed in a multiplexed state in the body (Paragraph [0002] – video and audio data, see Abstract), and a file of a second format, which includes first or second data collectively placed in the body, into the other of the files (Paragraphs [0015,0080,0142] – SDI or SDTI and MXF conversion).

Regarding Claim 62, Wilkinson teaches a data structure of a file of a format including a header, a body, and a footer (Paragraphs [0013+]), comprising:

- a video file wherein a header and a footer are added to a body in which video data are placed collectively (Paragraphs [0055,0090,0093,0110] – addition of header and footer with mapping);

- audio files for a plurality of channels in each of which a header and a footer are added to a body in which audio data of the channel are placed (Paragraphs [0055,0090,0091,0093,0110,0135] – addition of header and footer with mapping); and

- a master file describing a pointer to the video file and pointers to the individual audio files of the channels (Paragraphs [0110,0113,0127,0129]).

6.   Claims 4-9, 24-29 and 44-49 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Wilkinson (US 2002/0164149 A1) in view of Shirata et al. (US 2001/0043784 A1).

        Regarding Claim 4, Wilkinson teaches the conversion apparatus according to claim 3,

wherein said first format conversion means includes:

   •   video header/footer addition means for adding a header and a footer of a form same as

       that of a file of the first format to a body provided by the video data coupled by said video

       data coupling means to prepare a video file of said video data (Paragraphs

       [0055,0090,0093,0110] – addition of header and footer with mapping).

       Wilkinson fails to explicitly teach video data extraction means for extracting the video

data multiplexed with the audio data in a file of the first format; video data coupling means for

coupling the video data extracted by said video data extraction means. But Shirata et al.

teaches video data extraction means for extracting the video data multiplexed with the audio

data in a file of the first format (Paragraphs [0031,0032,0035]); video data coupling means for

coupling the video data extracted by said video data extraction means (Paragraphs

[0039,0040]).

        It would have been obvious to one having ordinary skill in the art at the time the

invention was made to have a device that extracts and separates both audio and video for

feasible signal processing of signals for addition or removal of data as well as quality

adjustments.

Regarding Claim 5, Wilkinson teaches the conversion apparatus according to claim 4, wherein said first format conversion means further includes file preparation means for preparing a master file describing a pointer to the video file (Paragraphs [0110,0113,0127,0129]).

Regarding Claim 6, Wilkinson teaches the conversion apparatus according to claim 3, wherein the audio data in a file of the first format are channel-multiplexed audio data formed from audio data of a plurality of channels multiplexed with each other (Paragraph [0115,0129,0125,0140]), and said first format conversion means includes:

- audio header/footer addition means for adding a header and a footer of a form same as that of a file of the first format to a body provided by the audio data of each of the channels to prepare audio files of the audio data for the individual channels (Paragraphs [0055,0090,0091,0093,0110,0135] – addition of header and footer with mapping).

Wilkinson fails to explicitly teach audio data extraction means for extracting the channel-multiplexed audio data multiplexed with the video data in a file of the first file format; audio data separation means for separating the channel-multiplexed audio data extracted by said audio data extraction means into the audio data of the individual channels. But Shirata et al. teaches audio data extraction means for extracting the channel-multiplexed audio data multiplexed with the video data in a file of the first file format (Paragraphs [0031,0032,0035]); audio data separation means for separating the channel-multiplexed audio data extracted by said audio data extraction means into the audio data of the individual channels (Paragraphs [0039,0040]).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a device that extracts and separates both audio and video for feasible signal processing of signals for addition or removal of data as well as quality adjustments.

Regarding Claim 7, Wilkinson teaches the conversion apparatus according to claim 6, wherein the channel-multiplexed audio data in a file of the first format are Key, Length, and Value (KLV)-encoded data (Paragraphs [0042,0044,0045,0050+]), and said first format conversion means includes:

- KLV structure decomposition means for decomposing a KLV structure of the KLV-encoded channel-multiplexed audio data extracted by said audio data extraction means and supplying resulting audio data to said audio data separation means (Paragraphs [0115,0135,0139,0140]); and

- KLV structuring means for KLV-encoding the audio data of the channels obtained by said audio data separation means so as to individually have a KLV structure (Paragraphs [0066-0068]); said audio header/footer addition means adding a header and a footer to a body provided by the audio data of each of the channels structured by said KLV structuring means so as to have a KLV structure (Paragraphs [0090,0091,0093,0095,0129,0135] – addition of header and footer with mapping).

Regarding Claim 8, Wilkinson teaches the conversion apparatus according to claim 6, wherein the audio data of a file of the first format are data encoded by a first coding method (Fig. 10, 40 - audio encode), and said first format conversion means further includes audio data conversion means for converting the audio data of the channels coded by the first coding method (Fig. 10, 42 – MXF creator; Paragraph [0133]) and obtained by said audio data separation means into audio data of the channels encoded by a second coding method (Fig. 10, 36 - SDTI-CP encoder).

Regarding Claim 9, Wilkinson teaches the conversion apparatus according to claim 6, wherein said first format conversion means further includes file preparation means for preparing a master file describing pointers to the audio files of the channels (Fig. 3 - mapping header for audio frames; in at least Paragraphs [0097,0119,0123]).

Claims 24 and 44 are rejected under the same grounds as claim 4.
Claims 25 and 45 are rejected under the same grounds as claim 5.
Claims 26 and 46 are rejected under the same grounds as claim 6.
Claims 27 and 47 are rejected under the same grounds as claim 7.
Claims 28 and 48 are rejected under the same grounds as claim 8.
Claims 29 and 49 are rejected under the same grounds as claim 9.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Choi whose telephone number is (571) 272-9594. The examiner can normally be reached on Monday - Friday 9:00AM - 5:30PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (571) 272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private

PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you

would like assistance from a USPTO Customer Service Representative or access to the

automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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